CITY OF KIRKLAND BUILDING PERMIT APPLICATION Permit #_____

ADDITIONS/ALTERATIONS to SINGLE FAMILY/2UNIT or ACCESSORY STRUCTURES (NEW/REPAIR)

(See #8 below for types of Accessory structures)

#1 **Site Address:** | **Project Name:**

Property Owner _____ Phone _____

Property Owner's Address _____ City, Zip Code _____

Describe Job to be Done _____

#2 **Contractor's Name** _____ Contractor's Reg. # _____

(Company Name) Expiration Date _____

Contractor's Address _____ State UBI # _____

City, Zip Code _____ Phone _____

OR – OWNER IS CONTRACTOR - I have read RCW Chapter 18.27.010 relating to definitions of general contractors and specialty contractors and RCW Chapter 18.27.110, which prohibits issuing permits without proof of registration, and owner is contractor.

OWNER/AGENT SIGNATURE: _____

#3 Contact Person _____ Daytime Phone _____

Address _____ Alt. Phone _____

City _____ State _____ ZIP _____ Fax # _____

*E-mail Address*_____

#4 MUST COMPLETE: Septic – if yes, see checklist attached.

Sewer District _____ **Septic:** Yes ☐ No ☐ **Water District** _____

#5 **Estimated Project Cost** _____

Lender_____

Address _____ Phone _____

#6 **Property Tax Account Number (Parcel #)** _____

Legal Description _____

_____

(Please submit 3 separate 8 ½ x 11 copies of the legal description with this application if it will not fit in space provided above.)

#7 COMPLETE ALL APPLICABLE: **Total new square footage of residence, including garage/ADU if attached: _____Sq. Ft.**

Single Family Residence	Existing Sq Ft	Added Sq Ft			Existing Sq Ft	Added Sq Ft
1st Floor				Garage		
2nd Floor				ADU		
3rd Floor				Deck		
Basement				Other		

#8 COMPLETE ALL APPLICABLE: **Total new square footage of Accessory Structure: _____ Sq. Ft.**

Accessory Structure	Existing Sq Ft	New or Added Sq Ft		
❑ Carport				❑ Dock - ❑New ❑Repair
❑ Barn				❑ Rockery
❑ Detached Studio				❑ Retaining Wall
❑ Shed/Shop				❑ Swimming Pool
❑ Other - describe:_____				

If partial demolition work is proposed, you must contact the Puget Sound Clean Air Organization regarding Asbestos requirements. For full details and to obtain asbestos forms, instructions and regulations go online: http://www.pscleanair.org/asbestos/asbe-cont-info.shtml or to ask other questions, by phone 1-800-552-3565. Failure to comply with asbestos requirements may result in penalties.

#9 By signing this application, I authorize employees/agents of the City of Kirkland to enter onto the property which is the subject of this application during regular business hours. The sole purpose of entry is to make any examination of the property which is necessary to process this application.

I certify under penalty of perjury that the information furnished by me is true and correct to the best of my knowledge and, further, that I am authorized by the owner of the above premises to perform the work for which permit application is made. I further agree to save harmless the City of Kirkland as to any claim (including costs, expenses, and attorney's fees incurred in investigation and defense of such claim), which may be made by any person, including the undersigned, and filed against the City of Kirkland, but only where such claim arises out of the reliance of the City, including its officers and employees, upon the accuracy of the information supplied to the City as a part of this application.

OWNER/AGENT: _____ DATE: _____

NOTE: For information on recycling construction and landclearing (CDL) debris, please go to www.kingcounty.gov and enter "recycling construction debris" in the search box (King County is migrating their web site from MetroKC.gov to KingCounty.gov so this is the most functional way to find this web page at this time.)

#10

Mechanical Appliances (G = Natural Gas, E = Electric, OT = Other)	Fuel Type	Size (BTU/kW)		Fuel Type	Size (BTU/kW)
No. _____ AC Unit ____tons ____HP			_____ Vent Fans		
_____ Clothes Dryers			_____ Woodstoves/Fireplaces		
_____ Furnace			_____ Gas Fireplace insert		
_____ Gas Piping - _____ feet			_____ Unit Heater/Wall Heater		
_____ Log Lighters/BBQ's			_____ Ranges		
_____ Thermostat Wiring _____ LF			_____ Boilers/Compressors		

#11

Water Supply Piping – MUST BE COMPLETED:

A. Fixture Units: Total number of Fixtures x Fixture Multiplier = Total Fixture Units

B. Distance from meter to most remote outlet: _____ feet.

C. Difference in elevation between meter and highest fixture: _____ feet above meter or _____ feet below meter.

D. Pressure in street main: _____ psi. (Measure with pressure gauge or check with water district.)

2006 UPC table 6-5 - Number of Plumbing Fixtures (including rough-ins)

Plumbing Fixtures	**Accessory Dwelling Unit**			**Main Residence**			**Total Fixture # X Multiplier**	***Total Fixture Units**
	Existing	New	Move	Existing	New	Move		
Bar Sink							X 1.0 =	
Bathtub or Combination Bath/Shower							X 4.0 =	
Bidet							X 1.0 =	
Clothes washer, Domestic							X 4.0 =	
Dishwasher, Domestic							X 1.5 =	
Hose Bibb, First							X 2.5 =	
Hose Bibb, Each Additional							X 1.0 =	
Kitchen Sink, Domestic							X 1.5 =	
Laundry Sink							X 1.5 =	
Lavatory (Bathroom Sink)							X 1.0 =	
Lawn Sprinkler, Each Head							X 1.0 =	
Shower (Stand Alone)- List Each Head							X 2.0 =	
Water Closet, (Toilet)							X 2.5 =	
Other:							X ___ =	
Traps (Other than above items)							**TOTAL FIXTURE UNITS:**	
Water Heater								
COLUMN TOTALS:							**Using alternate Table L-1** **Total Fixture count: _____**	

NOTE: TOTAL NUMBER AND TYPE OF PLUMBING FIXTURES MUST BE ENTERED ON THIS TABLE even if you choose to use the Alternate Plumbing Systems table L-1 on the next page. If you use the Alternate Plumbing System table, please enter the total fixture count from that page at the bottom of this table.

A total fixture count is needed to determine what size the water meter needs to be to support the fixture demand.

OFFICE USE ONLY (PLEASE DO NOT WRITE BELOW)

MINIMUM METER SIZE: _____ INCHES MINIMUM BUILDING SUPPLY: _____INCHES PRV. NEEDED? YES_____ NO_____

CITY OF KIRKLAND
UNIFORM PLUMBING CODE – WATER SUPPLY FIXTURE UNITS

ALTERNATE PLUMBING SYSTEMS using 2006 UPC TABLE L-1

(You have the option of using the Alternate Plumbing system Table L-1 to figure the fixture units by grouping fixtures into Kitchen units, Bathroom units, and Laundry units)

Individual Dwelling Units

Based on Bathroom Groups having 1.6 GPF Gravity-Tank Water Closets	**Main Residence Groups**		***ADU Groups - If applicable**		**Total Fixture Units**	
Half-Bath or Powder Room (Use this if no other bathroom groups)	_____	+	_____	x	3.5	_____
*1 Bathroom Group	_____	+	_____	x	5.0	_____
*1 ½ Bathrooms	_____	+	_____	x	6.0	_____
*2 Bathrooms	_____	+	_____	x	7.0	_____
*2 ½ Bathrooms	_____	+	_____	x	8.0	_____
*3 Bathrooms	_____	+	_____	x	9.0	_____
**Pick the group that most describes the overall house and/or Accessory Dwelling Unit from the list above.*						
*** Then add from choices below for additional Bathrooms or ½ baths:*						
**Each additional ½ Bath	_____	+	_____	x	0.5	_____
**Each additional Bathroom Group	_____	+	_____	x	1.0	_____
Kitchen Group (Sink and Dishwasher)	_____	+	_____	x	2.0	_____
Laundry Group (Sink and Clothes Washer)	_____	+	_____	x	5.0	_____
Additional units not on Table L-1						
Bidet	_____	+	_____	x	1.0	_____
Bar sink	_____	+	_____	x	1.0	_____
Hose Bib, First	_____	+	_____	x	2.5	_____
Hose Bib, Each Additional	_____	+	_____	x	1.0	_____
Additional Units not listed, use preceding table 6-4 to figure fixture count (Including lawn sprinkler heads) **See lawn sprinkler exception below*	_____	+	_____	x		_____
				Total Fixture Units		_____

Notes:

1. **A bathroom group, for the purpose of this table, consists of one water closet, up to two lavatories, and either one bathtub or one shower.**
2. **A half-bath or powder room, for the purposes of this table, consists of one water closet and one lavatory.**
3. **See Appendix L for scope and application of alternate plumbing systems.**

Declaration for Lawn Sprinkler exception from fixture count:

I declare that the lawn sprinklers will be on a timer that will operate the sprinklers during periods of low demand only.

_____ _____

Signed by Owner or Agent **Date**

#12 Stormwater Drainage Requirements

All projects creating 500ft² new impervious surface area shall meet stormwater requirements in the 2009 King County Surface Water Design Manual and the COK Addendum. Choose the type of drainage review below. More information is located in the PW Pre-Approved Plans, Policies D-2 and D-3, which are available at the PW counter or at: www.ci.kirkland.wa.us/depart/Public_Works/Development/Pre-Approved_Plans/Storm_Drainage.htm.

☐ Small Project Drainage Review Type I

☐ Small Project Drainage Review Type II

☐ Targeted Project Drainage Review

☐ Full Project Drainage Review

RODENT ABATEMENT DECLARATION

I have read and hereby certify that I will comply with Sections 9.04.010 through 9.04.050 of the Kirkland Municipal Code at the following project location:

_____
Property Owner Name

_____
Project Address

_____
Permit Number

_____
Signature (Required Owner or Contractor)

_____
Date

Chapter 9.04
RODENT CONTROL

9.04.010 Chapter purpose.

It is the purpose of this chapter to protect the public health and safety and prevent the spread of infectious and contagious diseases by rats, mice, and other rodents. (Ord. 3873 § 2 (part), 2002)

9.04.020 Duty to keep buildings and premises free of rodents—Right of entry for inspection.

The owner or occupant of real property shall keep all buildings and premises free from rats, mice and other rodents, to the extent reasonably possible, as determined by the building official. A property owner or occupant shall take all necessary measures to ensure that rats, mice or other rodents do not come into contact with food, food products, goods or merchandise. Subject to applicable constitutional and statutory constraints on entry, the building official or his appointed representative shall be permitted access to property or buildings for the purpose of ascertaining the presence of rats, mice and other rodents. (Ord. 3873 § 2 (part), 2002)

9.04.030 Duty to eradicate rodent infestation.

If rat, mice or other rodent infestation occurs, a property owner or occupant shall take all necessary measures to eradicate the infestation and prevent future infestation. In addition, the owner or occupant of the property shall perform all eradication measures as reasonably required by the building official. The provisions of this section shall not apply to wetlands, unimproved parks, greenbelts or other unimproved property if the property owner or occupant has not committed any acts or omissions that increase the likelihood of rat, mice or other rodent infestation. (Ord. 3873 § 2 (part), 2002)

9.04.040 Rat baiting.

All applicants for a demolition or a land surface modification permit and those persons undertaking a land clearing project shall initiate a rat baiting program on the project site at least fifteen days prior to the start of demolition, clearing or land surface modification activity. The baiting program must continue at least until the project begins, however, no demolition, clearing or land surface modification work shall commence until all significant rat activity has been abated even if it has been fifteen or more days since the initiation of the rat baiting program, unless approved by the building official. The rat baiting program shall be approved by a qualified pest control agent and be consistent with the Seattle-King County Health Department guidelines and recommendations for rat baiting. The use of any pesticides shall fully comply with WAC 162-28-1380. The building official shall not issue or deliver any demolition or land surface modification permit, nor shall any land clearing begin, until the applicant has filed with the city a copy of the rat baiting program and a declaration, under penalty of perjury, that the requirements of this section have been complied with. The rat baiting program may be terminated at any time, due to the lack of rat activity, upon a written recommendation of the pest control agent or upon approval of the building official, however, the program must be reinstated upon discovery of additional rat activity by the pest control agent or the building official and all work may be required to be stopped until the additional rat activity has been abated as determined in writing by the pest control or upon approval of the building official. At the discretion of the building official, a project unlikely to disturb a nesting place of rats may be exempted from the requirements of this section. (Ord. 4053 § 1, 2006: Ord. 3873 § 2 (part), 2002)

9.04.050 Violations of this chapter.

The building official is hereby authorized and empowered to enforce this chapter. Violation of this chapter constitutes a misdemeanor. Violation of this chapter also constitutes a public nuisance which may be abated or remediated pursuant to Chapter 11.24 of the Kirkland Municipal Code. The remedies prescribed in this chapter are in addition to all other remedies provided for or authorized by law. (Ord. 3873 § 2 (part), 2002)

Pest Control Companies

Name	Address	Phone	E-mail
Advantage Pest Control	P.O. 12663 Mill Creek, 98082-0663	425-453-4529	
Alderwood Pest Control	P.O. Box 55173 Seattle, WA 98155	800-499-2985	
Arrow Pest Control	P.O. Box 2176 Mount Vernon, WA 98273	425-259-8117	
Cascade Pest Control	14950 SE Allen Rd. Bellevue, WA 98006	425-641-6264	nopests@cascadepest.com
Eastside Exterminators	12535 Totem Lake Blvd NE Kirkland, WA	(425) 820-1137 (425) 454-6107	
Eden Advanced Pest Tech.	309 S. Cloverdale STE B6 Seattle, WA 98108	206-571-8262	waynes@edenpest2.com
Homegard Pest Control	11410 NE 124th #514 Kirkland, WA 98034	425-821-7038	homegardservices@aol.com
Orkin Exterminating CO Inc	5113 Pacific Highway East Tacoma, WA 98424	425-803-0454 800-562-5610	
Pestec	P.O. Box 2972 Renton, WA 98056	425-643-1664	
Sprague Pest Control Specialists	***Commercial Only 1136 Poplar Pl S Seattle, WA 98144.	800-421-0083	
Terminators Pest Control	14243 SE 22nd St Bellevue, WA 98007	425-823-8351	pestguy1@aol.com
Townsend Pest Control	11630 Slater Ave NE #5 Kirkland, WA 98034	425-392-2213	info@sunrisepest.com
United Pest Solutions	1341 N. Northlake Way, Ste 200 Seattle, WA 98103	425-747-1003	
Willard's Pest Control	13611 NE 126th Pl, Ste 200 Kirkland, WA 98034	425-451-7288	
Terminix Pest Control	11822 North Creek Pkwy N. #103 Bothell, WA 98011	800-772-8173	Tmx2141@terminix.com

NOTE: This is a list of certified rodent abatement companies who have submitted their names for your convenience. Please be advised that it is your responsibility to establish whether or not the services of a particular company are suitable for your needs. The City of Kirkland is not responsible for the work performed by the company that you retain.

Because many construction projects in the City of Kirkland are constructed to the minimum setbacks and maximum heights, accurate survey information is needed for City Staff to review plans and conduct inspections. The following Building Permit submittals shall include signed and stamped Property Line (Boundary) and Topographic Survey documents prepared by a Washington State Licensed Surveyor. A copy of an existing survey document may be used if it is legible and includes a signed surveyor's stamp and the original survey markers are still in place. **If survey information is required but not provided, the permit application will not be accepted.**

Property Line (Boundary) Surveys – The purpose of a property line survey is to assure that the required setbacks are complied with. The setbacks are measured from the property line to the outermost finish material of the exterior walls of the house. A Property Line (Boundary) Survey is required with the following types of Building Permits:

A. New commercial/multi-family structures;
B. Additions to commercial/multi-family structures;
C. New single family residences or Two Unit homes; and/or
D. Single family additions and single family accessory buildings.

*Exception: A Property Line (Boundary) Survey is not required for residential deck additions or modifications. A Property Line (Boundary) Survey is also not required with Building Permits for single-family additions or single-family accessory buildings if **all** of the following conditions are met:*

A. The structure is a least two feet away from all affected required building setback lines; and
B. The assumed property line is marked by a fence or other similar feature; and
C. There are no known property line disputes regarding the specific property line.

Topographic Surveys - A Topographic Survey with two foot contour intervals is required with the following types of Building Permits:

A. New commercial/multi-family structures;
B. Additions to commercial/multi-family structures;
C. New single family residences or Two Unit homes; and/or
D. Single family additions and single family accessory buildings.

*Exception: A Topographic Survey is not required with a Building Permit for a new single-family residence, single-family addition, single-family accessory building, or commercial or multi-family additions less than 1000 square feet if **one** of the following conditions is met;*

A. The lot is essentially level – there is no grade change greater than two feet between property corners; or
B. The building footprint (excluding uncovered decks) is changing less than 25%, the height of the addition does not exceed the height of the existing roof line, and the addition is not being made on a part of the property that is topographically lower than the existing building; or
C. The proposed building is designed to be two or more feet less than the maximum building height allowed for the property.

Building Height Field Verification - Building Height Field Verification is required for any building that is designed within one foot of the maximum building height allowed for the property. The Field Verification shall comply with the following:

A. The verification will be required at the time of the first floor underfloor inspection; and
B. The verification will be conducted by a Licensed Surveyor**; or
C. The verification will be conducted by the contractor using their own survey equipment in the presence of the building inspector if the contractor can demonstrate that the height is correct based on the measurement from the approved benchmark.

Note: When a contractor is verifying the height with their own survey equipment, the contractor shall have the equipment set up at least 30 minutes prior to the arrival of the Building Inspector. If the equipment is not set up, the contractor will need to reschedule the inspection for the following day.

**If the building is designed within one inch of the height limit, then a Licensed Surveyor shall verify the height.

BUILDING HEIGHT TABLE

(Applicant Must Complete)

MAXIMUM HEIGHT OF STRUCTURE ALLOWED see KZC 5.10.357 and applicable Use Zone Chart	BENCHMARK LOCATION AND DESCRIPTION (be specific)	BENCHMARK ELEVATION	FINISHED FIRST FLOOR ELEVATION	HEIGHT DIFFERENCE BETWEEN BENCHMARK AND FINISHED FIRST FLOOR ELEVATIONS	AVERAGE BUILDING ELEVATION (ABE) see KZC 115.59	ELEVATION OF HIGHEST POINT OF ANY ELEMENT OR FEATURE see KZC 115.60 for exceptions

Staff Use Only:

Building Height Field Verification is required: Yes or No (circle one)

If yes,
Building Height Field Verification by Licensed Surveyor (if within 1" of height limit): Yes or No (circle one)

3-10-08

CHECKLIST FOR SINGLE-FAMILY ADDITIONS AND/OR ALTERATIONS

☐ 1. **Three sets of plans** (plans done in pencil are not accepted) with a **4th Copy of the site plan**:

☐ a. **4 copies of the Site plan** - show all existing buildings and driveways and the location of the proposed addition and/or alteration. Show cross streets. Include the dimensions to all property lines. **Because significant trees are potentially impacted by proposed addition/alteration activity,** show all significant trees with tree drip line, and show all proposed trees to be removed as part of this project. See Planning Department 2006 Tree regulations, and submit the appropriate Tree Plan with this project. (Most likely it will be Tree Plan I – Minor).

☐ b. **3 sets of Construction drawings** - show all structural details, including foundation, framing and roof. If the addition and/or alteration is attached to the existing structure or within 10 feet of the existing structure, you will be required to show exterior details (i.e., windows, doorways, steps, decks, etc.) of the existing structure and designation of existing use of rooms and areas.

☐ 2. **2 sets, if required: Average Building Elevations calculations will be required** if there is any **change in the roof line**, if the **addition is two stories or more**, or if the **addition is occurring on a portion of the site with lower topography.**

☐ 3. **2 sets, if required: City of Kirkland energy forms relative to the Washington State Energy Code**, completed for all residential additions and/or alterations. Forms available at: http://www.energy.wsu.edu/code/

☐ 4. **Indicate method of Whole House Ventilation on the plans.** Must comply with 2009 IRC section M1508 as amended by the State of Washington.

☐ 5. **2 Copies, if required**: A report prepared by a professional engineer may be required if addition will occur on or within 25' of a regulated slope or on an area containing soft compressible soils.

☐ 6. **Completed Building Permit Application**. Boxes 1-9 must be completed, and boxes 10-11 must be completed when new mechanical and/or plumbing fixtures are moved and/or added to the addition and/or alteration.

☐ 7. **If including partial demolition work** with this application, you must contact the Clean Air Agency regarding Asbestos Abatement requirements. For full details and to obtain asbestos forms, instructions and regulations go online: http://www.pscleanair.org/asbestos/asbe-cont-info.shtml or to ask other questions, by phone 1-800-552-3565. Failure to comply with asbestos requirements may result in penalties.
By signing this application, I acknowledge that I understand and will comply with the Puget Sound Clean Air Organization's requirements regarding Asbestos Abatement.

☐ **8.** **If electrical work will be done, a separate electrical permit will be required.** Electrical permits can be obtained at the Kirkland Building Department, or on-line through www.mybuildingpermit.com. Call 425-587-3605 for electrical inspections.

☐ **9.** **If on a Septic System, and you are adding bedrooms**, please contact The Public Health Department for their requirements at 206-296-4600. You may also visit their website regarding septic systems and remodels at: http://www.metrokc.gov/HEALTH/wastewater/owners/index.htm

☐ **10**. **When plans are prepared by a licensed design professional, all plans and supporting documents must be stamped and signed by designer(s) of record.**

☐ **11.** **Contractor's UBI number and contractor's license number** are required prior to issuance.

Single Family Site Plan General Requirements: Review the next two pages.

Checklist continues after site plan requirements.

City of Kirkland

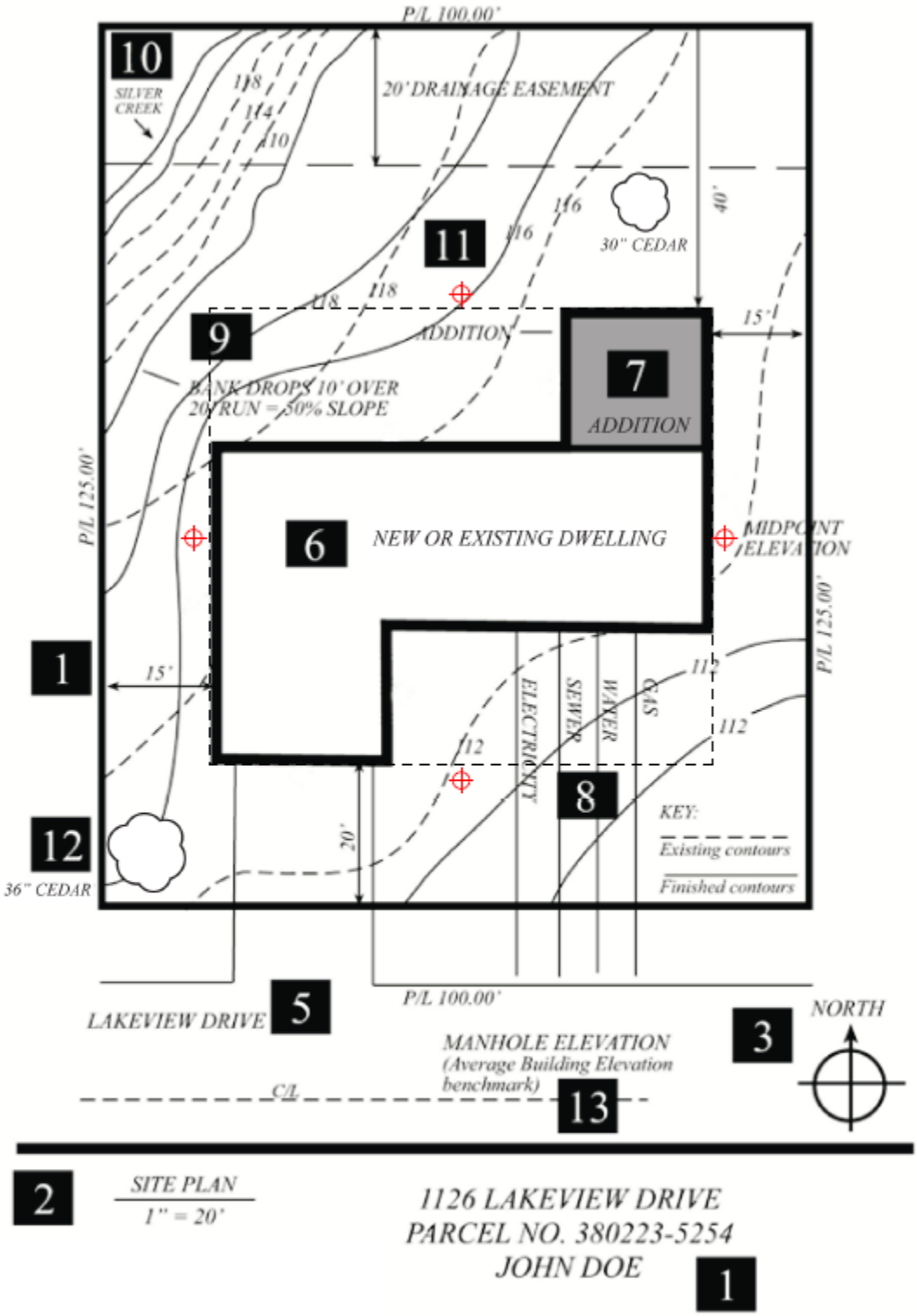
Single Family Site Plan General Requirements

Many different permits ***require*** a site plan (sometimes called a "plot" plan), which is a detailed and accurate map of the subject property. A complete and accurate site plan, drawn to scale, is important to avoid delays in the review and approval of your project. A complete site plan will include all the site features and information (depending on your site, of course) listed below. **On the next sheet** is a typical site plan.

NOTE: Construction of right-of-way improvements along the frontage of the property is required for all new single family residences, and all single family additions with a value greater than $200,000
(value of addition is determined using published Building Valuation Data available at the Building or Public Works Departments. The right-of-way improvements plan must be designed by a licensed civil engineer. These improvements include sidewalks, curbs and gutters, underground storm drainage, planter strip and street trees, and alley paving, among other items. For more information about this requirement, contact the Public Works Department at 425-587-3800.

1	The **property owner's name**, the assessor's **parcel number** and the site's **address**.
2	The map **scale**. A scale of 1"=20' is typical, but others, 1/8"=1'0" for example, are also acceptable.
3	A **North arrow** indicating the direction North.
4	All **property lines**, all **easements** (utilities, access, etc.), and site **dimensions**. Show the **distances** between buildings, and from buildings to all property lines.
5	All **streets** and **alleys**, with **street names**. Show all existing and/or proposed **driveways** (include surface materials).
6	The **location and dimensions** of all **existing** and **proposed** buildings. Identify each building by its use (garage, residence, etc.).Include **decks**, **retaining walls** and **rockeries**, and the like.
7	Clear **distinction** between the **existing** building and **proposed addition**. Also show any buildings to be **demolished.**
8	Locations of **sewer**, **water**, **electricity**, and **gas** lines, and any **underground storage tanks**.

9	Any **steep slopes** (15% or greater) and/or **fill** areas.
10	All **surface water** (creeks, streams, ponds, wetland, etc.) within 100 feet of the property.
11	Accurate **existing** and **finished topography** of site shown with **2-foot contour** intervals.
12	**Location, type and diameter of significant trees**. **Show drip line.** See Planning Department 2006 Tree regulations for **Tree Plan I** requirements (attached). An Arborist report may be required
13	**Relevant Average Building Elevation** information, including midpoint and benchmark elevations.
Note:	**Lot coverage** and supporting calculations. Can be on a separate sheet.
Note:	**FAR (Floor Area Ratio)** and supporting Calculations. Can be on a separate sheet.
Note:	**Show structures to be demolished.** Describe structures to be demolished; i.e. detached garage, shed, single family house.
Note:	**Erosion and Sedimentation Control (ESC) Plan,** which includes both a site plan and a narrative report. Requirements of small site ESC Plans are located in Appendix D of the 2009 King County Surface Water Design Manual, and are available at the PW Counter or at: http://www.kingcounty.gov/environment/waterandland/stormwater/documents/surface-water-design-manual.aspx



SAMPLE SITE PLAN

- **Lot coverage** and supporting calculations. Can be on a seperate sheet.
- **FAR (Floor Area Ratio)** and supporting Calculations. Can be on a seperate sheet.
- **Erosion and Sedimentation Control plan** required on site per example ESC plan (attached).
- **Show structures to be demolished.** Describe structures to be demolished.

☐ **12**. **<u>Floor Area Ratios</u> (FAR) (not applicable in Houghton).** Provide calculations by structure (garage, house, shed, etc) and area in square feet by floor (basement, 1st floor, 2nd floor, attic) of existing and proposed structures. FAR calculations must include:

1) Attic area with five feet or more headroom, and
2) Any floor area where the top of the supporting members of the ceiling is six feet or more above finished grade, and
3) Attached garages
4) Accessory structures within 20 feet of the main structure, and
5) Floor area with a ceiling height greater than 16 feet shall be calculated as follows:
   a) The first 100 square feet of such floor area, in aggregate, shall be calculated only once toward allowable FAR; and

   Floor area in excess of the first 100 square feet shall be calculated at twice the actual floor area toward allowable FAR.

☐ **13. 2 HARD COPIES AND AN ELECTRONIC COPY (if required): Stormwater Drainage Report/TIR.**

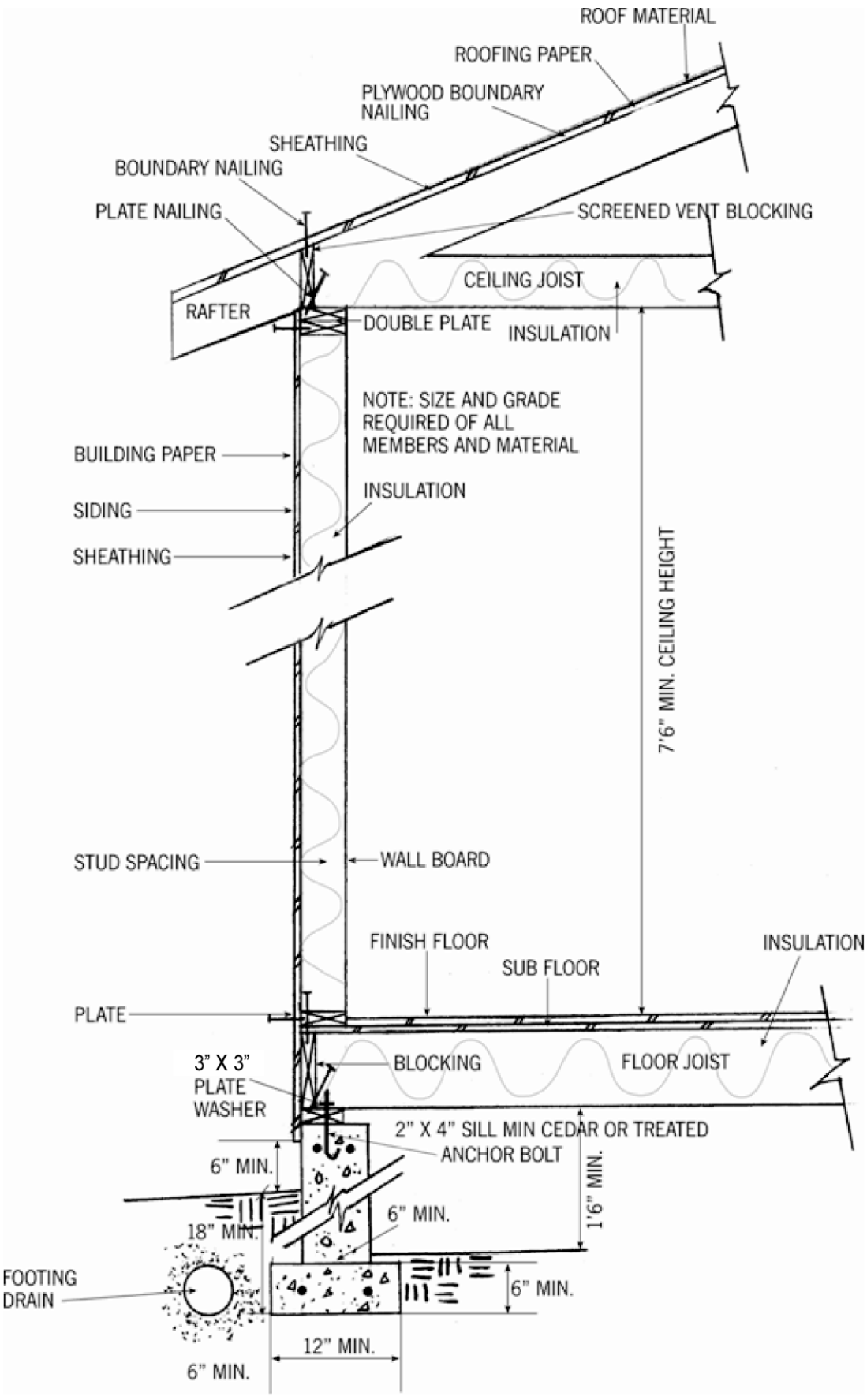
A hard copy and an electronic copy (pdf) of the Drainage Report/TIR are required for projects meeting the requirements for Small Project Type II, Targeted, and Full Drainage Reviews. Use the appropriate drainage report template depending on the project size and scope; the templates are available at the PW counter or in the FAQ section at:
http://www.ci.kirkland.wa.us/depart/Public_Works/Storm___Surface_Water/Stormwater_Update.htm

☐ **14. 2 COPIES (if required): *NEW* Stormwater Low Impact Development Feasibility Evaluation Worksheet.**

This worksheet is required for all projects meeting the requirements for Small Project Type II, Targeted, and Full Drainage Reviews. The worksheet will help define the drainage design parameters for the project. The form is in Policy L-1 of the PW Pre-Approved Plans, and is available in the permit application packet, at the PW counter, or at:
http://www.ci.kirkland.wa.us/depart/Public_Works/Development/Pre-Approved_Plans/LID_Storm_Facilities.htm

Note: The applicant must evaluate the site drainage, complete the Feasibility Worksheet, and present it with the building plans at intake, or the plans will not be accepted.

Check with Public Works to see if this would be required for your <u>addition</u> project. 425-587-3800



SAMPLE OF A TYPICAL CROSS SECTION DRAWING

CITY OF KIRKLAND
PLANNING & COMMUNITY DEVELOPMENT
123 5th Avenue, Kirkland, WA 98033 425.587.3225
www.ci.kirkland.wa.us

Tree Plan I - Single Family and Two/Three-Unit Homes

Trees and other vegetation are important elements of the physical environment which protect public health, safety and general welfare in a variety of ways. These regulations establish a process and standards to provide for the protection, preservation, replacement, proper maintenance and use of significant trees, associated vegetation and woodlands located in the City of Kirkland. **For new or major remodel of Single Family and Duplex, the regulations require retention of viable trees within the required setbacks. These sites are also required to meet a minimum density of tree coverage on the subject property following construction of the project. These requirements are discussed in Section 95.35.2.B.1 of the Kirkland Zoning Code (KZC) and are summarized below.**

Helpful definitions to complete the tree plans described below:

1. **Significant Tree**: A tree that is at least 6 inches in diameter at breast height (DBH) (The diameter or thickness of a tree trunk measured at 4.5 feet from the ground).
2. **Dripline**: The distance from the tree trunk that is equal to the furthest extent of the tree's crown.
3. **Impact**: A condition or activity that affects a part of a tree including the trunk, branches, and critical root zone.
4. **Qualified Professional**: An individual that must possess and demonstrate the ability to perform tree risk assessments and prescribe appropriate measures necessary for the preservation of trees during development; must at a minimum be certified by the International Society of Arboriculture (ISA).
5. **Critical Root Zone**: The area surrounding a tree at a distance from the trunk which is equal to one foot for every inch of diameter at breast height or otherwise determined by a qualified professional.

Permit Submittal Requirements - Single Family, Duplex and Two/Three-Unit Home Permits

The following information is required for all permits in order for the application to be deemed complete. Incomplete applications will not be accepted.

I. Tree Plan I - Major: Shall be submitted with single family permit application, including:

- Demolitions
- New or redeveloping Single Family homes, duplexes and two/three-unit homes approved under KZC Chapter 113
- Major remodels (adding over 50% of existing square footage) on a single lot

A. The following general information must be incorporated on the site plan:

1. Accurate location of all public trees (i.e. street trees) and private significant trees, their driplines measured relative to visible site features, and their critical root zone. Please number all trees (tag in field and label on plan) for reference purposes. *If the trees are not accurately located on a site plan, the Planning Official may require that their locations be surveyed.*
2. Size (DBH) and species (or at least type) of the significant trees
3. General health of these trees
4. Approximate trunk location and dripline of significant trees that are on adjacent property with driplines extending over the subject property line
5. If a report is not required, show the location of the tree fencing at each retained tree's critical root zone, fencing detail and tree protection notes (detail and notes available at http://www.ci.kirkland.wa.us/depart/planning/trees.htm)
6. Tree density calculations of retained trees compared to the minimum tree density for the site. The required minimum tree density is 30 tree credits per acre. Use the following formula to determine the required tree density:
   (Lot size in square feet/43,560) X 30 = Required minimum tree density

For example, the minimum tree density for a 7,200 square foot lot is five (5) tree credits and for 8,500 square feet, it is six (6) tree credits. Use the following chart to calculate the tree density for existing trees that are going to be retained.

NOTE: Tree density calculations do not apply to public trees.

Tree Density for Existing Significant Trees (Credits per minimum diameter - DBH)					
DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
3–5"	0.5				
6-10"	1	24"	8	38"	15
12"	2	26"	9	40"	16
14"	3	28"	10	42"	17
16"	4	30"	11	44"	18
18"	5	32"	12	46"	19
20"	6	34"	13	48"	20
22"	7	36"	14	50"	21

7. If the calculated tree density is below the minimum, indicate the type, size and location of the supplemental trees needed to meet the density requirement. Supplemental trees must be at least 6 feet tall if they are conifers or 2-inch caliper if they are deciduous or broad-leaf evergreens. They are worth one tree credit each. Larger supplemental trees may be awarded additional credits.

B. If there are significant trees in the required yards (setbacks) or within ten (10) feet of any side property line, the tree plan must include a report from a qualified professional containing the following information:
   1. Size and species of these trees
   2. A complete description of each tree's health and viability. If a tree is not viable for retention, the reason(s) must be soundly based on health, high risk of failure due to structure, defects, unavoidable isolation (windfirmness), or suitability of species and for which no reasonable alternative action is possible (pruning, cabling, etc.). The impact of necessary tree removal to remaining trees, including those in a grove or on adjacent properties, must also be discussed.
   3. The location of limits of disturbance around all trees potentially impacted by site disturbances and any special instructions for work within that protection area (hand-digging, tunneling, root pruning, maximum grade change).
   4. A discussion of timing and installation of tree protection measures that must include fencing and be in accordance with the Tree Protection Standards as outlined in KZC 95.35.6.
   5. The suggested location and species of supplemental trees needed to meet the required minimum tree density. The report shall include planting and maintenance specifications pursuant to KZC 95.45 and KZC 95.50.

II. Tree Plan I - Minor: Shall be submitted for all other types of single family, duplex or two/three-unit home (KZC Chapter 113) development activity not listed in Section I above.

A. The following general information must be incorporated on the site plan:
   1. Accurate location of all significant trees, their size (DBH), and their driplines measured relative to visible site features (survey not required). Please number all trees (tag in field and label on plan) for reference purposes.
   2. For any significant trees are potentially impacted in their critical root zone by proposed development activity provide species (or at least type) and general health of these trees
   3. Approximate trunk location and dripline of significant trees that are on adjacent property where driplines extends over the subject property line
   4. Location of tree fencing at each retained tree's critical root zone, fencing detail, and tree protection notes (detail and notes available at http://www.ci.kirkland.wa.us/depart/planning/trees.htm)

B. At least two (2) trees must be on the property at the end of the development activity, which may require planting of trees. Planted trees must be at least 6 feet tall if they are conifers or 2-inch caliper if they are deciduous or broad-leaf evergreens. Provide a planting plan and installation schedule.

Note: This is an overview of tree requirements, for more details and information visit our website at http://www.ci.kirkland.wa.us/depart/planning/trees.htm or request a copy of Ordinance 4010.

CALCULATING AVERAGE BUILDING ELEVATION

CITY OF KIRKLAND
Planning and Community Development Department
123 Fifth Avenue, Kirkland, WA 98033 425.587-3225
www.ci.kirkland.wa.us

NOTE:

INCOMPLETE AVERAGE BUILDING ELEVATION INFORMATION COULD SUBSTANTIALLY DELAY THE PROCESSING OF YOUR APPLICATION

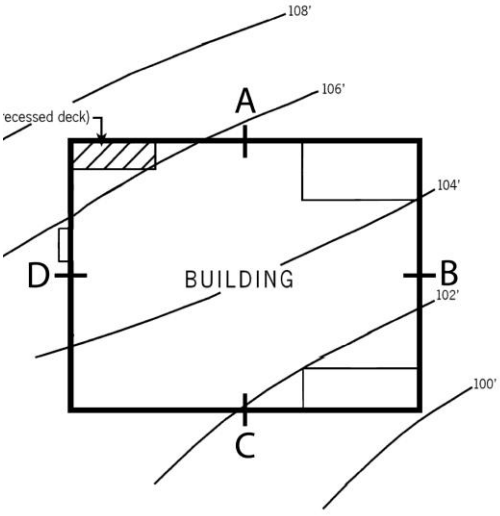
No part of a structure may exceed the maximum height above "Average Building Elevation" specified in the applicable use zone section of the Zoning Code except for minor elements of a structure as specified in Zoning Code Section 5.10.045 **defines Average Building Elevation as:**

"The weighted average elevation of the topography, prior to any development activity, either at the center of all exterior walls of a building or structure, either (Option 1) under the footprint of a building as measured by delineating the smallest rectangle which can enclose the building footprint and then averaging the elevations taken at the midpoint of each side of the rectangle or (Option 2) a second, more complicated, option for calculating Average Building Elevation is available. Contact the Planning Department at 425-587-3225 for details. When a building or structure contains townhouses or other attached but otherwise independent building units the average building elevation is calculated separately for each unit."

AVERAGE BUILDING ELEVATION FORMULA

Option 1

$$\frac{\text{(Midpoint Elevations) x (Length of Wall Segments)}}{\text{(Total Length of Wall Segments)}}$$



Site Plan
Not to scale

Calculating Average Building Elevation

$$\frac{(A \times a) + (B \times b) + (C \times c) + (D \times d)}{a + b + c + d} = \text{Average Building Elevation (ABE)}$$

Where A, B, C, D...= Existing Ground Elevation at Midpoint of Rectangle Segment*
And a, b, c, d...= Length of Rectangle Segment

Midpoint Elevation	Rectangle Segment Length
A = 105.6	a = 47'
B = 102.5	b = 40'
C = 101.9	c = 47'
D = 105.2	d = 40'

CALCULATION EXAMPLE:

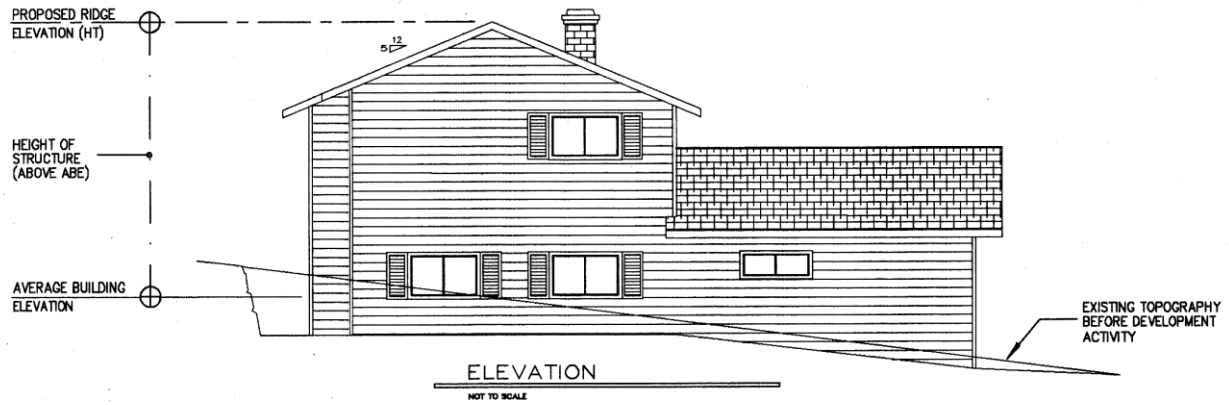
$$\frac{(105.6)(47)+(102.5)(40)+(101.9)(47)+(105.2)(40)}{47 + 40 + 47 + 40} = \frac{18{,}060.5}{174} = 103.80 \text{ ABE}$$

*Rectangle shall not include those items allowed to extend into required yards through KZC 115.115(3)(d).

BEFORE SUBMITTING YOUR CONSTRUCTION DRAWINGS, CHECK TO SEE THAT YOU HAVE PROVIDED THE INFORMATION BELOW. CALL THE PLANNING DEPARTMENT TO FIND THE MAXIMUM HEIGHT ABOVE ABE FOR YOUR ZONING DISTRICT.

- The site plan and the elevation drawings must be drawn to scale, for example 1"=20'.
- Clearly show existing topography on your site plan. Topography should be shown in 2' (min.) increments.
- Submit (with the site plan) your average building elevation calculations using the formula provided on the front side of this page.
- Indicate on an elevation drawing where the average building elevation strikes the building and show the proposed ridge elevation (see below for example).
- Indicate on the **site plan** the elevation of the finished floor or garage slab.
- Indicate the **elevation** and **location** of a **fixed point (benchmark)** within the ADJACENT RIGHT-OF-WAY or other point approved by the Planning Department. The benchmark elevation and location **must** be provided and cannot be a part of the proposed structure. Note: Benchmark must be established, verified and remain during construction so height can be verified when completed.
- Include portions of the structure that are covered by roof in the ABE calculation even if they do not have walls. Cantilevered portions enclosing interior space must be included in the ABE calculation.
- Sections of the structure that are below the existing grade and do not have a wall that extends above the existing grade, are not used in the ABE calculation. Building wall segments more than 4' in height above finished grade and enclosing interior space are included in the ABE calculation.
- For additions, you must provide an average building elevation calculation for the entire structure.
- Vents & chimneys may exceed the maximum height (for detached dwelling units)

CROSS-SECTION REPRESENTATION OF ABE



CITY OF KIRKLAND
123 FIFTH AVENUE □ KIRKLAND, WASHINGTON 98033-6189 □ (425) 587-3800

DEPARTMENT OF PUBLIC WORKS
PRE-APPROVED PLANS POLICY

Policy L-1: FEASIBILITY OF STORMWATER LOW IMPACT DEVELOPMENT (LID)

Applicants for projects meeting the threshold for drainage review (except Small Project Type I) must evaluate the feasibility and applicability of full dispersion and full infiltration. If full dispersion and full infiltration is not feasible, the applicant must still implement one or more stormwater LID best management practices (BMP) for a portion of the site.

The Stormwater LID Feasibility Evaluation Worksheets that accompany this policy are intended to be used by the applicant to aid in the feasibility determination. Some factors that can determine feasibility are: physical limitations of the site, engineering limitations, and financial costs. Applicants should submit the Stormwater LID Feasibility Evaluation Worksheets, along with other documentation (if applicable), with the permit application. Applicants should consult the 2009 King County Surface Water Design Manual (KCSWDM), section 5.2.1, for specific criteria of the evaluation process.

City policy is to require the installation of stormwater LID to the maximum extent feasible. The City also acknowledges that stormwater LID may not work on every site. If the evaluation indicates standard LID options listed in the worksheets may not be feasible, please contact City surface water staff at (425) 587-3800 to discuss site specifics. City staff may be able to assist applicants with other LID options.

Regardless of stormwater LID feasibility, the applicant must meet all flow control and water quality treatment requirements applicable to the project. LID BMPs can be counted towards those requirements. All stormwater LID BMPs must be designed and installed according to the 2009 KCSWDM, COK Addendum, and the PW Pre-Approved Plans.

Stormwater Low Impact Development (LID)
Feasibility Evaluation Worksheet
For Small Project Type II[1] & Targeted[2] Projects

The purpose of this form is to assist the applicant evaluate the feasibility of stormwater LID. This form should be submitted along with the permit application.

Date:	
Project Name:	
Project Address:	
Parcel Number(s):	
Applicant/Design Engineer Firm and Name:	
Project Use: SFR ☐ MF ☐ COM ☐ COM/IND ☐	
Type of Drainage Review: Small Project Type II ☐ Targeted ☐	
Site Area (sq. ft.):	**Roof Area (sq. ft.):**

1. Applicants are required to evaluate the feasibility and applicability of **full dispersion** for the entire roof area or an area of equivalent size on a project.

Feasibility items to consider for Dispersion	**Yes**	**No**
Does the site contain open space available for dispersion? (100ft flowpath)		
The site does not contain steep slopes, and is not located adjacent to a steep slope? (15% or greater)		
The site does not contain sensitive areas, and is not located adjacent to a sensitive area? (stream, wetland, or lake)		
Is dispersion not likely to cause or aggravate potential flooding or erosion problems to neighboring properties?		

Comments _____

_____

Is **full dispersion** of entire roof area (or an equivalent area) feasible? Yes ☐ No ☐

2. If dispersion is not feasible, applicants are required to evaluate the feasibility and applicability of **full infiltration** for the entire roof area or an area of equivalent size on a project.

Feasibility items to consider for Infiltration	**Yes**	**No**
Has a soil report/evaluation been prepared for the site?		
If so, does the soil report/evaluation indicate soil favorable for infiltration? (Type A or B)		
Does the UW soils map information indicate soil favorable for infiltration? Use the website below if a soil report or evaluation has not been prepared. http://geomapnw.ess.washington.edu/index.php?toc=maintoc&body=services/geodata/geodata.htm		
The site does not contain steep slopes, and is not located adjacent to a steep slope? (15% or greater)		
The site does not contain sensitive areas, and is not located adjacent to a sensitive area? (stream, wetland, or lake)		
Is infiltration not likely to cause or aggravate potential flooding problems to neighboring properties?		

Comments _____

Is **full infiltration** of entire roof area (or equivalent area) feasible? Yes ☐ ☐ No

3. Are there factors other than site constraints that would make full dispersion or infiltration not feasible for this site (like engineering limitations or financial costs)? Yes ☐ ☐ No

   If yes, provide explanation _____

   _____

4. If both full dispersion and full infiltration is not feasible, then **one or more of the BMPs listed below must be applied** for an area equal to 10% of this project site for sites up to 11,000ft^2, and 20% for sites between 11,000ft^2 and 22,000ft^2. Select which LID BMP option is proposed for this project (listed in order of preference):

   ☐ Limited Infiltration (Appendix C, section C.2.3)

   ☐ Basic Dispersion (Appendix C, section C.2.4)

   ☐ Rain Garden (Appendix C, section C.2.5)

   ☐ Permeable Pavement (Appendix C, section C.2.6)

   ☐ Rainwater Harvesting (Appendix C, section C.2.7)

   ☐ Vegetated Roof (Appendix C, section C.2.8)

   ☐ Reduced Impervious Surface Credit (Appendix C, section C.2.9)
   The reduction in impervious surface area below maximum lot coverage must be assured through covenant and/or alternative design of impervious surface area. Reduction techniques include: restricted footprint, wheel strip driveways, minimum disturbance foundation, and open grid decking over pervious surface. See specific criteria in section C.2.9.

   ☐ Native Growth Retention Credit (Appendix C, section C.2.10)
   Credit for preserving native growth at the rate of 1 sq ft impervious requires 3.5 sq ft of native vegetated surface.

Stormwater Low Impact Development (LID)
Feasibility Evaluation Worksheet
Full Project Review

The purpose of this form is to assist the applicant evaluate the feasibility of stormwater LID. This form should be submitted along with the permit application. The need for minimum flow control and water quality treatment measures still applies to the project, regardless of LID feasibility.

Date:	
Project Name:	
Project Address:	
Parcel Number(s):	
Applicant/Design Engineer Firm and Name:	
Project Use: SFR ☐ MF ☐ COM/IND ☐	
Site Area (sq. ft.):	**Target Impervious Surface[1] Area (sq. ft.):**

1. Applicants are required to evaluate the feasibility and applicability of **full dispersion** for all target impervious surface area on a project.

Feasibility items to consider for Dispersion	**Yes**	**No**
Does the site contain open space available for dispersion? (100ft flowpath)		
The site does not contain steep slopes, and is not located adjacent to a steep slope? (15% or greater)		
The site does not contain sensitive areas, and is not located adjacent to a sensitive area? (stream, wetland, or lake)		
Is dispersion not likely to cause or aggravate potential flooding or erosion problems to neighboring properties?		

Comments _____

_____

Is **full dispersion** of all target impervious area feasible? Yes ☐ No ☐

2. Are there factors other than site constraints that would make full dispersion or infiltration not feasible for this site (like engineering limitations or financial costs)? Yes ☐ No ☐

   If yes, provide explanation _____

   _____

3. For that portion of the target impervious surface where full dispersion is not feasible, then **one or more of the BMPs listed below must be applied** to a portion of the site's impervious surface area, based on the amount of impervious area on site:

   - For projects with 45% to 65% impervious in the developed condition, apply at least 1 LID BMP to at least 20% of the site/lot area or 40% of the target impervious surface (whichever is less).
   - For projects with more than 65% impervious in the developed condition, apply at least 1 LID BMP to at least 10% of the site/lot area or 20% of the target impervious surface (whichever is less).

   Select which LID BMP option is proposed for this project (listed in order of preference):

   ☐ Full Infiltration (Section 5.4)

   ☐ Limited Infiltration (Appendix C, section C.2.3)

   ☐ Basic Dispersion (Appendix C, section C.2.4)

   ☐ Rain Garden (Appendix C, section C.2.5)

   ☐ Permeable Pavement (Appendix C, section C.2.6)

   ☐ Rainwater Harvesting (Appendix C, section C.2.7)

   ☐ Vegetated Roof (Appendix C, section C.2.8)

   ☐ Reduced Impervious Surface Credit (Appendix C, section C.2.9)
   The reduction in impervious surface area below maximum lot coverage must be assured through covenant and/or alternative design of impervious surface area. Reduction techniques include: restricted footprint, wheel strip driveways, minimum disturbance foundation, and open grid decking over pervious surface. See specific criteria in section C.2.9.

   ☐ Native Growth Retention Credit (Appendix C, section C.2.10)
   Credit for preserving native growth at the rate of 1 sq ft impervious requires 3.5 sq ft of native vegetated surface – in other words, for every 3.5 sq ft of native vegetation area preserved, 1 sq ft of target impervious surface may be credited as mitigated.